to the formula of block 320, the eight VCI values for a 124th RAM would range from 1017 through 1024, and 1024 is an unacceptable value given the physical parameters of the system. Thus, the solution is, is to use the remainder when (n-1) is divided by (X-1). This essentially causes VCI values to be reused when the number of RAMs exceeds X. When VCI values are recycled, the VPI value must be changed in order to ensure that a unique VPI/VCI combination is assigned to each subscriber. For example, after the 123rd RAM, the VPI value could be incremented by one, so that recycling of VCI values does not cause collisions among subscribers in the combined VPI/VCI value.

REMARKS

The purpose of this amendment is to correct ministerial errors in the specification that appeared in the initial filing. This amendment does not add any new matter to the application as filed and is not offered for patentability purposes.

CONCLUSION

For the foregoing reasons, Applicant respectfully submits that the present changes be included into the present application without any prejudice in regards to patentability. An expedient and favorable first office action is respectfully requested.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned, "Version With Markings to Show Changes Made."

Respectfully submitted,

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Date: August 6, 2001

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

Please amend the Specification as follows:

Please replace the paragraph beginning at page 13, Line 8, with the following rewritten paragraph:

[Figure 3 shows an exemplary process performed by the NMS 120 of the illustrative ADSL network operations and management system 100 of Figure 1 to calculate the deterministic configuration variable VCI in accordance with the present invention. Processing begins at block 300 and proceeds to block 310 where a check is performed to determine if the sequence number (n) is less than a pre-defined number X. The pre-defined number X reflects the physical limitations of the cooperating ADSL components. In one example, an ADSL network may comprise a CO DSLAM that is capable of representing VCI values as 10-bit integers (0-1023), and values 0-32 may be reserved for system use. In this case, 991 VCI values (the number of integers between 33 and 1023, inclusive) are available for assignment as VCI values for subscriber PVCs. Moreover, the exemplary ADSL network comprises RAM network components each having eight input ports. Under these parameters, the pre-defined number X is 123 (i.e. 991 subscribers divided by 8). As will be seen below, X represents the condition that the VCI numbers must be recycled after 123 8-port RAMs are connected to the DSLAM, because 8 input ports multiplied by 124 RAMs is greater than 991, and thus there would be insufficient numbers in the range 33-1023 to handle a 124^{th} 8-port RAM.

Note to Inventor: Is the above description correct and accurate?

If the sequence number is less than the pre-defined number X, processing proceeds to block 320 where the VCI value is calculated using the equation:

$$VCI = 33 + (n-1) * 8 + Mpos,$$

where: n = CO DSLAM Sequence Number (i.e. connection position of contributing RAM on CO DSLAM)

Mpos = ADSL Port Position on Contributing RAM

Processing then proceeds to block 350 and therefrom.]

Figure 3 shows an exemplary process performed by the NMS 120 of the illustrative ADSL network operations and management system 100 of Figure 1 to calculate the deterministic configuration variable VCI in accordance with the present invention. Processing begins at block 300 and proceeds to block 310 where a check is performed to determine if the sequence number (n) is less than a pre-defined number X. The pre-defined number X reflects the physical limitations of the cooperating ADSL components. In one example, an ADSL network may comprise a CO DSLAM that is capable of representing VCI values as 10-bit integers (0-1023), and values 0-32 may be reserved for system use. In this case, 991 VCI values (the number of integers between 33 and 1023, inclusive) are available for assignment as VCI values for subscriber PVCs. Moreover, the exemplary ADSL network comprises RAM network components each having eight input ports. Under these parameters, the pre-defined number X is 123 (i.e. 991 subscribers divided by 8). As will be seen below, X represents the condition that

the VCI numbers must be recycled after 123 8-port RAMs are connected to the DSLAM, because 8 input ports multiplied by 124 RAMs is greater than 991, and thus there would be insufficient numbers in the range 33-1023 to handle a 124th 8-port RAM. If the sequence number is less than the pre-defined number X, processing proceeds to block 320 where the VCI value is calculated using the equation:

$$VCI = 33 + (n-1) * 8 + Mpos,$$

where: n = CO DSLAM Sequence Number (i.e. connection position of contributing RAM on CO DSLAM)

Mpos = ADSL Port Position on Contributing RAM

Processing then proceeds to block 350 and therefrom.

Please replace the paragraph beginning at page 14, Line 16, with the following rewritten paragraph:

[Returning now to block 310, if it is determined that n is not less than X, processing proceeds to block 330 where a check is performed to determine if the sequence number, n, is greater than or equal to the pre-determined parameter X. If the check proves to be negative, processing terminates at block 360. However, if the sequence number is greater than or equal to the pre-determined parameter X, processing proceeds to block 340 where the VIC value is calculated using the following formula:

$$VCI = 33 + [mod ((n-1)/(X-1))-1 * 8 + Mpos,$$

where: n = CO DSLAM Sequence Number

X = Pre-defined ADSL Network Physical Parameter

Mpos = ADSL Port Position on Contributing RAM

Note to Inventor: Could you please provide a paragraph or two to better define the variables Mpos, Dpos, and n (sequence number)?

It will be observed that block 340 implements the "recycling" of VCI values. As noted in the example above, if there are only 991 available VCI values, then it is not possible to assign a unique VCI value to subscribers connected to RAMs in excess of 123 (i.e., for a 124th RAM, the calculation would be 33 + (124-1)*8 + Mpos. 33+(124-1)*8 = 1017, which means that, according to the formula of block 320, the eight VCI values for a 124th RAM would range from 1017 through 1024, and 1024 is an unacceptable value given the physical parameters of the system. Thus, the solution is, is to use the remainder when (n-1) is divided by (X-1). This essentially causes VCI values to be reused when the number of RAMs exceeds X. When VCI values are recycled, the VPI value must be changed in order to ensure that a unique VPI/VCI combination is assigned to each subscriber. For example, after the 123rd RAM, the VPI value could be incremented by one, so that recycling of VCI values does not cause collisions among subscribers in the combined VPI/VCI value.]

Returning now to block 310, if it is determined that n is not less than X, processing proceeds to block 330 where a check is performed to determine if the sequence number, n, is greater than or equal to the pre-determined parameter X. If the check proves to be negative, processing terminates at block 360. However, if the sequence number is greater than or equal to

the pre-determined parameter X, processing proceeds to block 340 where the VIC value is calculated using the following formula:

$$VCI = 33 + [mod ((n-1)/(X-1))-1 * 8 + Mpos,$$

where: n = CO DSLAM Sequence Number

X = Pre-defined ADSL Network Physical Parameter

Mpos = ADSL Port Position on Contributing RAM

It will be observed that block 340 implements the "recycling" of VCI values. As noted in the example above, if there are only 991 available VCI values, then it is not possible to assign a unique VCI value to subscribers connected to RAMs in excess of 123 (i.e., for a 124th RAM, the calculation would be 33 + (124-1)*8 + Mpos. 33+(124-1)*8 = 1017, which means that, according to the formula of block 320, the eight VCI values for a 124th RAM would range from 1017 through 1024, and 1024 is an unacceptable value given the physical parameters of the system. Thus, the solution is, is to use the remainder when (n-1) is divided by (X-1). This essentially causes VCI values to be reused when the number of RAMs exceeds X. When VCI values are recycled, the VPI value must be changed in order to ensure that a unique VPI/VCI combination is assigned to each subscriber. For example, after the 123rd RAM, the VPI value could be incremented by one, so that recycling of VCI values does not cause collisions among subscribers in the combined VPI/VCI value.